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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Junichi Akama

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03/10/2005

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EXAMINER

NGUYEN, TRUC T

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/613,028	Applicant(s) AKAMA ET AL	
	Examiner Truc T. T. Nguyen	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005 and 23 December 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,8,10-15 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,8,10-15 and 17-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Objections*

Claim 7 cannot be further examined because it depend on the canceled claim 6.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Morlion et al. (US 5,429,521).

Morlion et al. disclose a connector, comprising (see Figure 13):

signal contacts (10) arranged in two arrays and of a common length; and

a panel-shaped ground contact (67) that are commonly provided in the two arrays and divide each array of signal contacts into multiple pairs, the multiple pairs of signal contacts being adjacent to one another throughout the common length thereof.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Billman (US 6,435,913).

Regarding claim 1, Billman discloses a connector (2), comprising (see Figures 6-8):  
a housing (4); and

multiple pairs of signal contacts (6), each two signal contacts that are paired with each other being arranged side by side at a distance in the longitudinal direction of the housing, the multiple pairs of signal contact being arranged so as to form multiple arrays arranged side by side in the transverse direction of the housing, each of the multiple pairs of signal contacts that have an identical length; and

a panel-shaped ground contacts (38) provided between respective, neighboring pairs of the multiple pairs of signal contact in each of the multiple arrays, each of the panel-shaped ground contacts being of a size sufficient to shield the multiple pairs of signal contacts from each neighboring pair and being provided commonly to the multiple arrays arranged side by side in the transverse direction of the housing; and

an array intermediate ground contact (20) between each two neighboring arrays of the multiple pairs of signal contacts.

Billman does not specifically disclose the identical length of contacts is designed for balanced transmission. This feature is seen to be an inherent teaching of that device since a

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identical length of contacts is disclosed and it is apparent that the balance transmission effect must be present for the connector to function as intended.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 10-15, 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosler, Sr. et al. (US 5,718,592) in view of Billman (US 6,435,913).

Hosler, Sr. et al. disclose an electronic device comprising:

a wiring substrate (102) for a connector mounted thereon;

the connector comprising:

a housing (24);

multiple pairs surface mount type signal contacts (44) having bending ends (50)

and arranged in multiple arrays;

wherein the length of the housing in the longitudinal direction is greater than the distance between each pair of the signal contacts;

wherein substrate contact parts of the multiple pairs of signal contacts arranged one of the two arrays extend in the opposite direction from substrate contact parts of the multiple pairs of signal contacts arranged in the other one of the two arrays.

wherein substrate contact parts of the multiple pairs of signal contacts arranged one of the two arrays face substrate contact parts of the multiple pairs of signal contacts arranged in the other one of the arrays, all the substrate contact parts extending in same direction;

wherein a pair of signal contacts arranged in one of the two arrays and a pair of signal contacts arranged in the other one of the two arrays exist between each two neighboring ground contacts;

wherein a pair of signal contacts arranged in one of the two arrays and a pair of signal contacts arranged in the other array that faces the one of the two arrays via an insulating member exists between each two neighboring ground contacts;

wherein a pair of signal one of the two arrays and pair contacts arranged the other array that faces the one of the two arrays a space exist between each two neighboring ground contacts;

wherein the ground contacts each has a and are provided across both two arrays;

wherein each of the ground contacts provided across both two arrays, and has top ends facing each other;

wherein parts of the signal contacts to be connected a mating connector extend in a direction perpendicular parts of the signal contacts be connected to a substrate;

wherein parts of the signal contacts to be connected a mating connector extend in the opposite direction from parts of the signal contacts to be connected to substrate;

wherein the signal contacts arranged in the two arrays are aligned at intervals the longitudinal direction of the connector;

wherein other signal contacts provided in each array, the other signal contacts each array are arranged at intervals, without the ground contacts being interposed among the other signal contacts.

Hosler, Sr. et al. substantially disclosed the claimed inventions except for the signal contacts are identical in length and a ground contacts with pair of contact part, the ground contacts divided the array signal contacts into multiple pairs.

Billman teaches array of signal contacts (6) have identical length and is divided into multiple pairs by a panel-shaped ground contacts (38) with pair of contact parts (40) and an array ground contact (20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an identical length signal contacts and a ground contacts between the pairs into Hosler, Sr. et al's connector, as taught by Billman for minimizing electromagnetic interference.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Billman (US 6,435,913) in view of Matsumoto et al. (US 6,150,606).

Billman substantially disclosed the claimed invention except for a shielding layer is formed on the housing.

Matsumoto et al. teach a shielding layer is coated on a surface of a connector case (see Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a shielding layer onto Billman's connector housing, as taught by Matsumoto et al. for reducing electromagnetic interference.

*Response to Arguments*

Applicant's arguments with respect to claims 1-2, 8, 10-15, 17-24 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Truc T. T. Nguyen whose telephone number is 571-272-2011. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on 571-272-2800 extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Truc T. T. Nguyen  
Primary Examiner  
Art Unit 2833

